Emotional Problems in Children

The Uses of Drugs in Therapeutic Management

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• Emotional disturbances in children may be due to an anxiety state, to obsessive-compulsive neurosis, to schizophrenia or to a brain injury causing a behavior disorder. Children in an anxiety state have difficulty in school because anxiety interferes with concentration, impairs memory and makes decisions difficult. Consequently, these children often fear school and express their anxiety by behavior disturbances which alienate them from parents and teachers.

There are a number of chemotherapeutic agents physicians can use as a part of the treatment of emotionally disturbed children. Phenobarbital is valuable for short-term therapy for the anxious child. Meprobamate also may be prescribed for anxiety reactions. It is of limited value for the hyperkinetic and obsessive-compulsive child and of no value in the schizophrenic child. Atarax (hydroxyzine dihydrochloride) is beneficial for the neurotic and hyperkinetic brain-injured child. Children with severe anxiety reactions and schizophrenic disorders respond best to chlorpromazine or reserpine.

It must be emphasized that drug therapy is a part of the total therapeutic attack on the emotional problems of children.

PARENTS FREQUENTLY CONSULT a physician because their child is having either scholastic or behavior difficulties. Children of this sort challenge the diagnostic and therapeutic acumen of the physician who must make a differential diagnosis and select an effective treatment. This is particularly true in this day of pharmacotherapy when parents, their hopes stimulated by the things they read in publications of general circulation, expect the family physician to treat their child with a tablet.

Emotional disturbances in children may be due to a functional psychic disorder such as an anxiety state or schizophrenia, or to a brain injury causing a behavior disorder. These conditions may be manifested by either scholastic or behavior disorders or both. It is these secondary effects of emotional disturbance which initially attract attention to the child and confound parents and teachers who overlook the primary disorder and hasten to correct the symptoms. Consequently, their well-intentioned efforts are misdirected and fail to alleviate the problem. This causes the adults to hold the child responsible for his difficulties and to label him "bad," "stubborn," or "unmanageable." Hence most emotionally disturbed children are not taken to a physician until their illness has persisted for months.

Every disturbed child must be thoroughly studied and an accurate diagnosis established before treatment is begun. It is incumbent upon the physician to take a careful history, to observe the child closely, to do a physical and neurological examination, and to secure special diagnostic tests when indicated. It is imprudent to casually assume that a child's anxiety or aberrant behavior is temporary, that he "will outgrow it," or that it is the outcome of parental ineptness or emotional instability. Such attitudes are not conducive to careful diagnostic screening or judicious treatment.

Since therapeutic failures and even an aggravation of deviant behavior are invited by a physician who treats a child without knowledge of the nature of his disorder or the pharmacologic action of the compound he prescribes, a brief review of some of these emotional disorders and the symptoms characteristic of them may be helpful.

The most common emotional disturbance in children is an anxiety state. This may be a transient symptom reflecting a temporary reaction to a stressful situation, or it may be a persistent manifestation of a serious underlying disorder. Regardless of its duration the symptom of anxiety is always an impediment to efficient intellectual function and smooth interpersonal relations.

The scholastic attainments of an anxious child are seldom proportionate to his basic capabilities because anxiety interferes with concentration, impairs memory and makes decisions difficult. In addition, an anxious child becomes preoccupied with his feelings and it is difficult for him to participate or maintain interest in things outside of himself. His ability to study, therefore, is impaired.

The inability to perform well scholastically causes an anxious child to detest and fear school. Sometimes his school phobia becomes so overwhelming he refuses to attend classes or expresses his anxiety by behavior disturbances which alienate him from his parents and teachers who put pressure upon him to

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conform to conventional modes of behavior. This intensifies his anxiety and a vicious circle ensues.

Many anxious children are reared in an unstable environment, often by parents who are neurotic or are disabled by a character disorder. The history of such children usually includes feeding problems, nightmares, enuresis or disturbed bowel function. Except for some evidence of increased activity of the sympathetic nervous system, children with an anxiety reaction are physically and neurologically sound. When examined, they may be reticent at first, but cooperative. Unless they are severely anxious, it is uncommon for them to leave the office not "friends" with the physician.

Not to be confused with an anxiety reaction is an obsessive-compulsive neurosis which occurs in children over seven years old. In the cases of such children there is frequently a family history of mental illness, particularly of schizophrenia. Usually their obsessive thinking, phobias and compulsive rituals have existed for months or years before medical help is sought, for most parents make light of these symptoms until they have persisted without sign of abating. Because of their tendency to introversion these children have difficulty relating to others, including the examining physician. They evade direct discussion of their symptoms. Hence they appear uncooperative and examination of them taxes the physician's ingenuity. Many attempt to conceal their compulsions; others make no effort to do so. At times their compulsive tics and other motor movements must be distinguished from myoclonic seizures. Usually no other abnormalities are noted on physical and neurological examination.

A less frequent (but more prevalent than formerly supposed) cause of emotional disturbance in children is schizophrenia. Often in the family of a child with this illness there is a history of schizophrenia. In children this disorder develops so insidiously that the parents usually cannot describe the clinical symptoms as easily as they can the symptoms of a neurosis or the hyperkinetic behavior of a brain-injured child. Usually the physician must elicit the characteristic symptoms of schizophrenia by questioning the parents who in retrospect can see each symptom as it is mentioned. These are: Seclusiveness, irritability when the seclusiveness is disturbed, excessive daydreaming, bizarre behavior, diminution of interests or failure to be attracted by objects and activities which normally entice children of similar age and intelligence, regressive personal interests or the voluntary selection of and participation in amusements and occupations which usually attract younger children, sensitivity to comment and criticism and physical inactivity or overactivity.

It is rare to find a physical or neurological abnormality in a schizophrenic child. What is more obvious and more diagnostic is the behavior of the child in the physician's office. Withdrawal, evasiveness, suspiciousness, inability to relate to the physician, monosyllabic responses, bizarre and unusual phobias, lack of appropriate emotional response—these are symptoms which should cause a physician to suspect schizophrenia.

Anxiety may or may not be a prominent feature of childhood schizophrenia. When present it has the same detrimental effect on intellectual function and interpersonal relations as was described previously. Anxiety in a schizophrenic child may cause unusual irritability, temper tantrums and aggressive outbursts directed toward others. Even without anxiety, schizophrenia causes scholastic and behavior difficulties. At home a child with schizophrenia gradually isolates himself from family and friends and retreats into a world of fantasy. In school his scholastic achievement declines as he becomes more preoccupied with abstract ideas and less interested in the world of reality.

In children who have had trauma at birth, injury to the brain in early life or a severe illness with cerebral symptoms, hyperkinetic behavior may develop because of brain injury. The parents may note that from infancy they have been hyperactive, impulsive, destructive, aggressive and difficult to manage. Their teachers report poor performance in the basic school skills—reading, spelling and arithmetic. Their hyperkinetic behavior, negativism, and other forms of antisocial behavior make them a disrupting factor in the classroom. Intellectually they may be retarded or they may have normal or above average intelligence. Upon physical and neurological examination there may be no abnormalities noted, or there may be minor to severe neurological abnormalities. Quite apparent are restlessness, short attention span, easy distractibility and tendency to perseverate.

Whenever possible it is advisable to obtain for such children an electroencephalogram and a test with the Wechsler Intelligence Scale for Children. Most children of this kind have abnormal electroencephalograms with a predominance of slow wave activity. As scored by the Wechsler test, the majority have a performance intelligence quotient significantly below their verbal intelligence quotient and an impairment of their visual motor coordination. Such findings help to explain the psychopathologic nature of the disorder and should make parent and physician more understanding of these unfortunate children.

PHARMACOLOGIC MANAGEMENT

The pharmacologic management of emotional disorders of children as out-patients is possible. Necessary for success are a physician skilled in pharmacotherapy, a realistic therapeutic goal and a most care-

ful selection of children for treatment. The attitude of the physician is a factor, for the physician conveys his attitudes to the child and the parents. A kind, sympathetic physician who unites firmness with compassion and optimism is much more likely to achieve success than another physician using the same drugs in proper doses with a negative attitude.

Before prescribing a drug the physician must impress upon the parents the absolute necessity of their assuming responsibility for making sure that the child gets the medication exactly as prescribed. Often failures with drugs or improvement less than expected is attributable to parental laxity in this respect. Parents must be forewarned not to be alarmed by side effects that are due to the physiologic action of the drug. On the other hand, to insure early detection of serious side reactions, parents also must be instructed to report any unusual physical or emotional change in the child. They should be admonished not to discontinue medication in either case without first consulting the physician.

Since there may be wide differences in the doses of a drug required to restore emotional stability, a physician must pay attention to individual susceptibility to a compound and not hesitate to prescribe increasing doses until the therapeutic level is attained or toxicity intervenes. Equally important is therapeutic persistence. It is unrealistic optimism to expect to reverse chronic disorders with a short course of drug therapy. Many of the successes with drug therapy must be attributed to a physician's persistence in the face of difficulties and willingness to take legitimate risks. There is no serious danger with prolonged administration of the drugs to be discussed, provided the child is properly supervised. Parents must be taught this and be advised that they should not expect the child to show dramatic improvement or be completely relieved of all symptoms by drugs alone. They should know and accept that the goal of therapy is not necessarily cure but symptomatic relief which removes their child from one stage of disability to a lesser one. This instruction of parents is worth all the effort required of the physician, for properly indoctrinated parents are understanding and cooperative parents—an asset to the treatment of the patient.

Physicians in general practice have many pharmacologic agents they may prescribe for emotional and behavior disturbances of children. It is hardly possible or practical for them to have a thorough working knowledge of all these drugs. Hence, they should strive to become thoroughly acquainted with a few which they can use advantageously and with the least risk.

Phenobarbital was the cornerstone of pharmacotherapy for many of the disorders discussed in this presentation. It still is a valuable compound for the short-term treatment of anxiety reactions. The most serious drawback to using it is the reduction of mental acuity it causes—a most undesirable effect in a child who goes to school. This can be counteracted, without stimulating, by small doses of Ritalin® (methyl-phenylacetate hydrochloride). Phenobarbital is not beneficial to and often enhances the hyperkinetic behavior of a brain-injured child.

Meprobamate may be prescribed for anxiety reactions. It is of little value for a hyperkinetic child or an obsessive-compulsive child and of no value in the treatment of a schizophrenic child. This drug is not an innocuous compound and should not be prescribed indiscriminately. Children receiving it should be carefully supervised. In clinical use meprobamate is not much better than phenobarbital. It causes drowsiness in some children but, as with phenobarbital, this can be counteracted by Ritalin.

Atarax® (hydroxyzine dihydrochloride) may be of definite value to neurotic children and hyperkinetic brain-injured children. This drug lessens tension, relieves symptoms of disturbed autonomic function and calms hyperkinetic behavior. For these purposes larger doses than those recommended for children must be used. Few children are benefited by less than 75 to 100 mg. daily. Some children, especially hyperkinetic children, may require 200 mg. to 300 mg. daily. Children under 6 years of age should be given syrup of Atarax in doses of 50 mg. a day to begin with. For older children administration should be started at one 25 mg. tablet two or three times daily and the dose increased until the therapeutic level is reached. Thereafter, the dose should be decreased gradually. Although studies of prolonged administration of Atarax are incomplete, this drug has been given to some children for six months or more without obvious deleterious effects.

Atarax also may be used advantageously to reduce anxiety in children who become distressed when faced with unpleasant, fear-provoking situations such as diagnostic tests in the hospital, painful treatments, dental work and minor surgical operations. Single or repeated doses of 25 mg. orally or intramuscularly a few hours before such events usually suffice to alleviate anxiety and get the child's cooperation.

Atarax has not had a sufficient trial in schizophrenic children to assess its value for this disorder. Limited studies of this drug in ambulatory schizophrenic children indicate that doses in excess of 200 mg. daily mitigate anxiety to some degree. Its therapeutic effectiveness, however, cannot be compared to that of Thorazine® (chlorpromazine) or Serpasil® (reserpine). Hence, until more definitive studies are completed, a physician should not prescribe Atarax for schizophrenic children.

Thus far Atarax has been relatively free of side effects. This enhances its value for school children,

who seldom experience drowsiness or impairment of intellectual function with therapeutic doses. Experimentally, children have tolerated well doses in excess of the average therapeutic dose. This drug does not potentiate barbiturates and may be used in combination with anticonvulsants when an epileptic child develops an emotional disorder.

Thorazine and Serpasil are potent tranquilizers especially suitable for severe anxiety reactions and schizophrenic disorders. They have not been used successfully for the treatment of hyperkinetic brain-injured children, except to modify anxiety. At times they have aggravated the hyperkinesis of these children. Likewise they must be used skillfully when prescribed for an obsessive-compulsive child. Many such children have developed feelings of unreality and depersonalization when treated with Thorazine or Serpasil. These undesirable psychological reactions have increased anxiety rather than relieved it, necessitating discontinuance of the drug.

Children with an anxiety state may require from 50 to 300 mg. of Thorazine daily or 0.25 to 2 mg. of Serpasil daily. Schizophrenic children, for whom these drugs are the best available, usually require 150 to 300 mg. of Thorazine or 1 to 2 mg. of Serpasil daily. It is best to start with small doses and to increase the dose rapidly until the therapeutic level is reached or toxicity intervenes. Either of these drugs may be prescribed for long periods, especially for schizophrenic children. However, they are most effective in the first two months of treatment. Thereafter in many children a tolerance for them seems to develop, necessitating progressive increase in dosage. Even then the therapeutic effect is not much greater than that obtained initially.

Thorazine and Serpasil may cause side effects due to their physiological action or allergic reactions due to hypersensitivity to the compound. The former are not serious; the latter may be and warrant immediate discontinuing use of the drug. Both drugs frequently induce lassitude and psychomotor retardation, a hindrance to scholastic performance. This can be relieved by Ritalin. Thorazine has caused photosensitivity in many children. This is an annoying and troublesome side effect which often makes discontinuance necessary. Serpasil may cause nasal congestion and enuresis. The former may be relieved by nasal decongestants, although in some children this is not effective and use of the drug has to be stopped. Parents usually are more disturbed by drug-induced enuresis than the children and some refuse for that reason to give the drug to their child.

COMMENT

Pharmacologic agents, although they alter behavior and are of benefit in emotional disorders in children, are not cures; they do not change the basic psychopathologic condition. Ideally, the drug therapy should be a part of the total therapeutic attack on the problem. The children who respond best to drug therapy are those for whom other forms of psychological care and environmental adjustments are carried out at the same time. These factors in the treatment are much more readily dealt with by a physician who uses drug therapy, for the symptomatic relief afforded by the drugs gives him more time to concentrate on the other needs of the child. It also helps in getting the cooperation of the parents, for they are relieved of the upsetting effect of their child's symptoms and can more objectively cope with the problem.

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ADDENDUM

REGARDING "Malformation of the Odontoid Process" published in the June issue of CALIFORNIA MEDICINE, we should like to draw attention to a recent paper by A. Bachs, L. Barraquer-Bordas, L. Barraquer-Ferré, J. D. Canadell, and A. Modolell: "Delayed Myelopathy Following Atlanto-Axial Dislocation by Separated Odontoid Process," Brain, 78:537-553, Part IV, 1955. In it, several further relevant cases are reported.

We regret that this report had escaped us. Although very detailed, it does not cite any of our references.

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